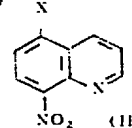
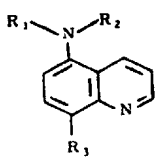


<p>88-103078/15 B02 SSSE 26.08.86 SS PHARMACEUTICAL KK *J6 3054-363-A 26.08.86-JP-199458 (08.03.88) A61k-31/47 C07d-207 C07d-213 C07d-215/38 C07d-307 C07d-401/04 C07d-403/04 C07d-405/04 New quinoline derivs. - useful for treatment of heart disease, arthritis, lumbago or toothache C88-046512</p>	<p>B(6-D2, 12-D1, 12-D3, 12-D7, 12-F1A, 12-F1B) USE (1) are useful for treatment of heart disease, arthritis, lumbago or toothache, because they show cardiotonic, antiarrhythmic, antiinflammatory and analgesic activities. PREPARATION (1)  (I) + (II) → (III) (2) (I: NR₁R₂ = piperazino; R₁ = NO₂) may be reacted with R₃ Y to give (I: NR₁R₂ = 4-(R₃)-piperazino; R₁ = NO₂; Y = leaving group; R₃ = lower alkyl, aralkyl, acyl, formyl, aryl, heteroaralkyl, pyridyl or arylsulphonyl, all opt. subst'd. (3) (I: R₁ = NO₂) may be reduced to (I: R₁ = NH₂) then opt. N-acylated.</p>
<p>Quinoline derivatives (I) are new:</p>  (I) R ₁ = H; R ₂ = opt. subst'd. lower alkyl; or NR ₁ R ₂ = nitrogen-, oxygen- or sulphur-contg. ring opt. having a substituent; R ₃ = nitro, amino or acylamino.	<p>J63054363-A</p>

DERWENT PUBLICATIONS LTD.

<p>EXAMPLE 5-Chloro-8-nitroquinoline (2.50g) and piperazine (5.16g) were dissolved in 2-ethoxyethanol (50 ml.). The soln. was heated under reflux for 5 hours and concd. Ice-water was added and the mixt. was extd. with chloroform. The extract was washed, dried and concd. The residue was chromatographed on a column of silica gel with chloroform-methanol (95:5) to give crystals, which were recrystd. from chloroform-ether to give 8-nitro-5-piperidino- quinoline (2.70g), yield 85%, m.pt. 119-121°C. (7ppw33DAHDwgNo0/0).</p>	<p>J63054363-A</p>
--	--------------------

DERWENT PUBLICATIONS LTD.